

## WORLD INTELLECTUAL PROPERTY ORGANIZATION International Bureau



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification <sup>6</sup>:

B44F 1/12, B32B 5/16, 31/12, B42D
15/10, 101/00, 209/00, 211/00, 217/00,
223/00, 225/00

(11) International Publication Number: WO 00/18591

(43) International Publication Date: 6 April 2000 (06.04.00)

(21) International Application Number: PCT/AU99/00830

(22) International Filing Date: 28 September 1999 (28.09.99)

(30) Priority Data:
PP 6244
29 September 1998 (29.09.98) AU

(71) Applicant (for all designated States except US): SECURENCY PTY LTD. [AU/AU]; Hume Highway, Craigiebum, VIC 3064 (AU).

(72) Inventors; and
 (75) Inventors/Applicants (for US only): ZIENTEK, Paul [AU/AU]; 546 Station Street, North Carlton, VIC 3054 (AU). WILSON, Gerard, Joseph [IE/AU]; Unit 13/79 Oxford Street, Collingwood, VIC 3066 (AU).

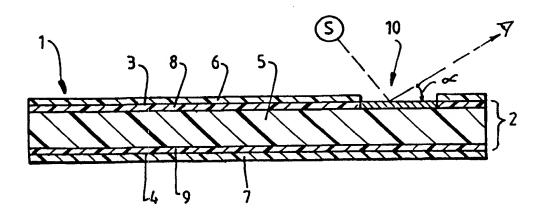
(74) Agent: CARTER SMITH & BEADLE; Quantas House, 2 Railway Parade, Camberwell, VIC 3124 (AU).

(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published

With international search report.

(54) Title: SECURITY DOCUMENT INCLUDING A NANOPARTICLE-BASED AUTHENTICATION DEVICE



## (57) Abstract

A security document (1) comprising a sheet like substrate (2) having one or more layers containing particles for forming an authentication device (10) in a first location on the security document (1), the particles having at least a first dimension in the range 1 to 200 nanometers. Various methods of producing a security document and a method of producing a security feature are also disclosed.